Neither the claim amendments nor the new claims presented herein represent new matter.

Claim Rejections under 35 U.S.C. §102 (e) and (b)

The Examiner has rejected claims 1-24 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,070,015 ("Shiomi"). Claims 1-24 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,386,264 ("Sekine").

According to the amended claims 1, 4, 13, 16 and 25, driving characteristics (*e.g.*, response amplitude and phase shift, offset) of a movement correction unit with respect to a predetermined driving signal are detected, and correction information corresponding to the detected result is stored. Further, according to the amended claims 7, 10, 19, and 22, the movement correction unit is driven using the stored correction information.

The important difference between the present invention and the cited references is that the present invention is aimed at correcting *driving characteristics of the movement correction unit* for correcting vibration, not at vibration correction itself, whereas the cited references are aimed at correcting *vibration in image signals*. Since the movement correction unit will suffer from a mechanical degradation or a delay in response due to the lapse of time or change in temperature (*see* Applicant's specification, page 3, lines 21-26), it is important to correct driving characteristics of the movement correction unit for correcting vibration in order to properly perform vibration correction.

Shiomi discloses an image blur prevention device which activates a feedback loop of a driving image blur correction means on the basis of a difference between a sensor output (*e.g.*, blur amount) outputted from a blur detection sensor for detecting blur, and an actual driving amount of the image blur correction means which is driven in accordance with the sensor

output. The image blur prevention device uses data (*e.g.*, a parameter) stored in a rewritable memory upon calculating a *signal* (*e.g.*, a driving signal) *used for image blur prevention*.

Thus, it is apparent that there is no teaching of detecting movement characteristics (*e.g.*, response amplitude and phase shift, offset) of a movement correction unit with response to a predetermined signal (*e.g.*, predetermined driving signal) in Shiomi.

Sekine discloses the steps of detecting a movement of an image and compensating an image signal. It also discloses the step of changing a detection area and detecting sensitivity of movement detection means for discriminating between the movement of a camera and a movement of an object.

Accordingly, it is apparent that there is no teaching of detecting movement characteristics (*e.g.*, response amplitude and phase shift, offset) of a movement correction unit in response to a predetermined signal (*e.g.*, predetermined driving signal)" in Sekine.

At least on these grounds Applicant respectfully submits that his invention is neither anticipated nor rendered obvious in light of Shiomi or Sekine, either alone or taken in combination. Having overcome the rejections of claims 1-24 under 35 U.S.C. §102 (b) and (e), Applicant submits that the application is in condition for allowance, which prompt allowance is earnestly sought.

In the event that a telephone conference would facilitate prosecution of the application in any way, the Examiner is invited to contact the undersigned at the number provided. An early and favorable examination on the merits is respectfully requested.

AUTHORIZATION

A petition for a two-month extension of time is herewith included, along with a check for the requisite fee. The Commissioner is hereby petitioned for such extension of time

should it become necessary. The Commissioner is hereby authorized to charge any additional fees which may be required for this Request for Reconsideration, or credit any overpayment, to Deposit Account No. 13-4500, Order No. 1232-4248US3. A COPY OF THIS PAGE IS HEREWITH INCLUDED.

Respectfully submitted,

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Date: October 8, 2002

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APPENDIX:
AMENDMENTS SHOWING INTERLINEATIONS AND DELETIONS

1. (Amended) A detection method for detecting driving characteristics of a vibration correction apparatus having a vibration detection device adapted to detect a vibration, a movement correction unit for correcting a movement of an image due to the vibration based on a vibration detection output detected by said vibration detection device, and a controller adapted to control an operation of said movement correction unit,

said method comprising:

providing a predetermined driving signal to the movement correction unit;

driving the movement correction unit on the basis of the provided predetermined driving signal;

detecting response [characteristics] amplitude and phase shift of the movement correction unit [by comparing a driving result signal obtained by driving the movement correction unit] with respect to said predetermined driving signal; [and]

obtaining correction information for [correcting driving characteristics] changing a transfer frequency characteristic of a control system including the vibration detection device and the movement correction unit in accordance with the detected response [characteristics] amplitude and phase shift; and

storing the obtained correction information.

3. (Amended) The method according to claim 1, wherein upon obtaining the correction information, correction information corresponding to the detected response [characteristics] amplitude and phase shift is selected and fetched from a memory storing plural pieces of predetermined correction information.

4. (Amended) A detection method for detecting driving characteristics of a vibration correction apparatus having a vibration detection device adapted to detect a vibration, a movement correction unit for correcting a movement of an image due to the vibration based on a vibration detection output detected by said vibration detection device, and a controller adapted to control an operation of said movement correction unit;

said method comprising:

providing a predetermined driving signal to the movement correction unit;

driving the movement correction unit on the basis of the provided predetermined driving signal;

detecting [response characteristics] a driving range of the movement correction unit by comparing a driving result signal obtained [by comparing a driving result signal obtained by driving the movement correction unit] with respect to said predetermined driving signal;

calculating an offset of the detected driving range of the movement correction unit with respect to a predetermined driving range reference value;

obtaining correction information for correcting a driving [characteristics] limit of the movement correction unit in accordance with the [detected response characteristics] calculated offset; and

storing the obtained correction information.

6. (Amended) The method according to claim 4, wherein upon obtaining the correction information, correction information corresponding to the [detected response characteristics] calculated offset is selected and fetched from a memory storing plural pieces of predetermined correction information.

7. (Amended) A detection method for detecting driving characteristics of a vibration correction apparatus, correcting, and driving the vibration correction apparatus, wherein the vibration correction apparatus has a vibration detection device adapted to detect a vibration, a movement correction unit for correcting a movement of an image due to the vibration based on a vibration detection output detected by said vibration detection device, and a controller adapted to control an operation of said movement correction unit;

said method comprising:

providing a predetermined driving signal to the movement correction unit;

driving the movement correction unit on the basis of the provided predetermined driving signal;

detecting response [characteristics] amplitude and phase shift of the movement correction unit [by comparing a driving result signal obtained by driving the movement correction unit] with respect to said predetermined driving signal;

obtaining correction information for [correcting driving characteristics] changing a transfer frequency characteristic of a control system including the vibration detection device and the movement correction unit in accordance with the detected response [characteristics] amplitude and phase shift; and

driving the movement correction unit using the correction information.

9. (Amended) The method according to claim 7, wherein upon obtaining the correction information, correction information corresponding to the detected response [characteristics] amplitude and phase shift is selected and fetched from a memory storing plural pieces of predetermined correction information.

10. (Amended) A detection method for detecting driving characteristics of a vibration correction apparatus, correcting, and driving the vibration correction apparatus, wherein the vibration correction apparatus has a vibration detection device adapted to detect a vibration, a movement correction unit for correcting a movement of an image due to the vibration based on a vibration detection output detected by said vibration detection device, and a controller adapted to control an operation of said movement correction unit;

said method comprising:

providing a predetermined driving signal to the movement correction unit;

driving the movement correction unit on the basis of the provided predetermined driving signal;

detecting [response characteristics] a driving range of the movement correction unit [by comparing a driving result signal obtained by driving the movement correction unit] with respect to said predetermined driving signal;

calculating an offset of the detected driving range of the movement correction unit with respect to a predetermine driving range reference value;

obtaining correction information for correcting a driving [characteristics] limit of the movement correction unit in accordance with the [detected response characteristics] calculated offset;

storing the obtained correction information; and

driving the movement correction unit using the stored correction information.

12. (Amended) The method according to claim 10, wherein upon obtaining the correction information, correction information corresponding to the [detected response

characteristics] calculated offset is selected and fetched from a memory storing plural pieces of predetermined correction information.

13. (Amended) A detection method for detecting driving characteristics of a vibration correction apparatus having a vibration detection device adapted to detect a vibration, a movement correction unit for correcting a movement of an image due to the vibration based on a vibration detection output detected by said vibration detection device, and a controller adapted to control an operation of said movement correction unit;

said method comprising:

outputting a [reference] driving signal [representing a state in which the vibration detection device detects] corresponding to a predetermined vibration;

driving the movement correction unit on the basis of the outputted [reference] driving signal;

detecting response [characteristics] amplitude and phase shift of the movement correction unit[, upon being driven, by comparing a driving result signal obtained by driving the movement correction unit] with respect to the outputted [reference] driving signal; [and]

obtaining correction information for [correcting driving characteristics] changing a transfer frequency characteristic of a control system including the vibration detection device and the movement correction unit in accordance with the detected response [characteristics] amplitude and phase shift; and

storing the obtained correction information.

15. (Amended) The method according to claim 13, wherein upon obtaining the correction information, correction information corresponding to the detected response

[characteristics] amplitude and phase shift is selected and fetched from a memory storing plural pieces of predetermined correction information.

16. (Amended) A detection method for detecting driving characteristics of a vibration correction apparatus having a vibration detection device adapted to detect a vibration, a movement correction unit for correcting a movement of an image due to the vibration based on a vibration detection output detected by said vibration detection device, and a controller adapted to control an operation of said movement correction unit;

said method comprising:

outputting a [reference] driving signal [representing a state in which the vibration detection device detects] corresponding to a predetermined vibration;

driving the movement correction unit on the basis of the outputted [reference] driving signal;

detecting [response characteristics] a driving range of the movement correction unit[, upon being driven, by comparing a driving result signal obtained by driving the movement correction unit] with respect to the outputted reference driving signal;

calculating an offset of the detected driving range of the movement correction unit with respect to a predetermined driving range reference value;

obtaining correction information for correcting a driving [characteristics] limit of the movement correction unit in accordance with the [detected response characteristics] calculated offset; and

storing the obtained correction information.

18. (Amended) The method according to claim 16, wherein upon obtaining the correction information, correction information corresponding to the detected [response

characteristics] calculated offset is selected and fetched from a memory storing plural pieces of predetermined correction information.

19. (Amended) A detection method for detecting driving characteristics of a vibration correction apparatus, correcting, and driving the vibration correction apparatus, wherein the vibration correction apparatus has a vibration detection device adapted to detect a vibration, a movement correction unit for correcting a movement of an image due to the vibration based on a vibration detection output detected by said vibration detection device, and a controller adapted to control an operation of said movement correction unit;

said method comprising:

outputting a [reference] driving signal [representing a state in which the vibration detection device detects] corresponding to a predetermined vibration;

driving the movement correction unit on the basis of the outputted [reference] driving signal;

detecting response [characteristics] amplitude and phase shift of the movement correction unit[, upon being driven, by comparing a driving result signal obtained by driving the movement correction unit] with respect to the outputted [reference] driving signal;

obtaining correction information for [correcting driving characteristics] changing a transfer frequency characteristic of a control system including the vibration detection device and the movement correction unit in accordance with the detected response [characteristics] amplitude and phase shift;

storing the obtained correction information; and

driving the movement correction unit using the [obtained] stored correction information.

21. (Amended) The method according to claim 19, wherein upon obtaining the correction information, correction information corresponding to the detected response [characteristics] amplitude and phase shift is selected and fetched from a memory storing plural pieces of predetermined correction information.

22. (Amended) A detection method for detecting of a vibration correction apparatus, correcting, and driving the vibration correction apparatus, wherein the vibration correction apparatus has a vibration detection device adapted to detect a vibration, a movement correction unit for correcting a movement of an image due to the vibration based on a vibration detection output detected by said vibration detection device, and a controller adapted to control an operation of said movement correction unit;

said method comprising:

outputting a [reference] driving signal [representing a state in which the vibration detection device detects] corresponding to a predetermined vibration;

driving the movement correction unit on the basis of the outputted [reference] driving signal;

detecting [response characteristics] a driving range of the movement correction unit[, upon being driven, by comparing a driving result signal obtained by driving the movement correction unit] with respect to the outputted reference driving signal;

calculating an offset of the detected driving range of the movement correction unit with respect to a predetermined driving range reference value;

obtaining correction information for correcting a driving [characteristics] limit of the movement correction unit in accordance with the [detected response characteristics] calculated offset; [and]

storing the obtained correction information; and

driving the movement correction unit using the [obtained] stored correction information.

24. (Amended) The method according to claim 22, wherein upon obtaining the correction information, correction information corresponding to the detected [response characteristics] calculated offset is selected and fetched from a memory storing plural pieces of predetermined correction information.